UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/773,298	02/09/2004	Seung-Mi Kang	P56973	8751

7590 02/20/2007	EXAMINER
Robert E. Bushnell 1522 K Street, N.W. Suite 300 Washington, DC 20005	LIN, JASON K

ART UNIT	PAPER NUMBER
2609	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/20/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

PTOL-90A (Rev. 10/06)

	Application No.	Applicant(s)
Office Action Summary	10/773,298	KANG ET AL.
	Examiner	Art Unit
	Jason K. Lin	2609

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>09 February 2004</u>.

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-20</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1-7,12 and 17-20</u> is/are rejected.

7) ☒ Claim(s) <u>8-11 and 13-16</u> is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on <u>09 February 2004</u> is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☒ All b) ☐ Some * c) ☐ None of:

      1. ☒ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date <u>2/09/2004, 10/27/2006</u>.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

1.   This office action is responsive to application No. 10/773,298 filed on

02/09/2004. **Claims 1-20** are pending and have been examined.

Information Disclosure Statement

2.   The information disclosure statement (IDS) filed on 02/09/2004 is
considered.

The information disclosure statement (IDS) filed on 10/27/2006 is
accepted but not considered because the document number for Balabanian et al.
was not provided.

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for

all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described
> as set forth in section 102 of this title, if the differences between the subject matter sought to
> be patented and the prior art are such that the subject matter as a whole would have been
> obvious at the time the invention was made to a person having ordinary skill in the art to which
> said subject matter pertains. Patentability shall not be negatived by the manner in which the
> invention was made.

2.   The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1,

148 USPQ 459 (1966), that are applied for establishing a background for

determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3.   **Claims 1-4, 6, 7, 12, 17, 19, 20** are rejected under 35 U.S.C. 103(a) as

being unpatentable over ISO/IEC 13818-6 (First edition 1998-09-01) in view of

JERDING et al. (2006/0206913).

Consider **claim 1**, ISO/IEC 13818-6 teaches a method for

controlling network digital broadcasting service (P. xix [0. Introduction], 2nd

paragraph, Described further in detail in Clause 4), comprising steps of:

directly requesting, at a client, a SRM (Session Resource Manager)

for a session connection, and establishing a session by receiving a

confirmation message for the session connection from the SRM

("Network" referred to here refers to "SRM" as shown in Fig. 0-1 on P.xx,

since clause 4 relates to User to Network Session Messages as stated in

the contents on P. iii. P. 76 Step 1 teaches "the Client shall send

ClientSessionSetUpRequest to the Network..." to establish a new session

connection. P. 78 Steps 7-8 teaches the client receiving a

ClientSessionSetUpConfirm message from the SRM establishing the

session connection. As seen on Fig. 4-6, the client is directly sending and

receiving messages from the SRM); and

directly requesting, at the client, the digital broadcasting server for a

channel change, and changing a channel by receiving a confirmation

message for the channel change from the digital broadcasting server (P.

492-495 teaches a client directly requesting a broadcast program from the

SDB Server. A SDBProgramSelectRequest is generated by the client and

sent to the SDB Server for requesting a channel change. A

SDBProgramSelectConfirm from the SDB Server is received by the client

allowing the client to receive the requested Broadcast Program).

ISO/IEC 13818-6 does not teach that the SRM (Session Resource Manager) can also reside at the digital broadcaster server.

In the same field of endeavor JERDING et al. teaches session setup and controlling video distribution between server and client. JERDING et al. also teaches a SRM (Session Resource Manager) that resides at the digital broadcaster server (cable headend) (Fig. 2, Paragraph 0037 teaches where both the MOD application server 19 and the digital network control system [DNCS, SRM] are both located at the cable television headend 11.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the device in ISO/IEC 13818-6 to have the SRM at the cable headend as taught in JERDING et al. for the advantage of providing the cable service providers with greater control and manageability over the broadcasting infrastructure.

Consider **claim 2, as applied to claim 1 above**, ISO/IEC 13818-6 and JERDING et al. teaches receiving, at the client, a message for checking a status of the client from the digital broadcasting server, and directly delivering a confirmation message for checking the status of the client to the digital broadcasting server (P.90-91 teaches that the client can receive a ClientStatusIndication message sent from the SRM which requests information. The client in turn sends back a ClientStatusResponse containing the information that was requested.

Referring back to Table 4-16 on P.56, many different statusType fields can

be used for specifying what type of status is requested including the status

of the client. JERDING et al. teaches that the SRM can be located at the

cable headend [digital broadcasting server]).

Consider **claim 3, as applied to claim 1 above**, ISO/IEC 13818-6

teaches directly requesting, at the client, the digital broadcasting server for

a session termination and terminating a session by receiving a

confirmation message for the session termination from the digital

broadcasting server ("Network" referred to here refers to "SRM" as shown

in Fig. 0-1 on P.xx, since clause 4 relates to User to Network Session

Messages as stated in the contents on P. iii. P. 81-82 teaches a client

initiating a release request. Step 1 teaches the client directly sending a

ClientSessionReleaseRequest message to the SRM for releasing an

existing session. Step 4-5 teaches receiving a

ClientSessionReleaseConfirm message from the SRM terminating the

session. JERDING et al. teaches that the SRM can be located at the

cable headend [digital broadcasting server]).

Consider **claim 4, as applied to claim 1 above**, ISO/IEC 13818-6

teaches directly requesting, at the digital broadcasting server, the client for

a session termination and terminating a session by receiving a

confirmation message for the session termination from the client (P. 87 –

88, step 2 teaches sending a ClientSessionReleaseIndication to the client

for releasing an existing session. The SRM receives the

ClientSessionReleaseResponse from the client and releases all the

resources assigned to the session terminating the session for the client.

JERDING et al. teaches that the SRM can be located at the cable

headend [digital broadcasting server]).

Consider **claim 6, as applied to claim 1 above,** ISO/IEC 13818-6

teaches wherein a protocol between the client and the digital broadcasting

server is a TCP/IP (Transmission Control Protocol/Internet Protocol) (P.

xxv teaches that the transport layer in Fig. 0-3 on P. xxiv may consist of

any protocol including TCP over IP. P. 291 also teaches that Switched

Digital Broadcast (SDB) Channel Change Protocol (CCP) can be carried

on top of various protocols including IP where their constraints are further

defined in clause 9, allowing for the use of TCP over IP).

Consider **claim 7, as applied to claim 1 above,** ISO/IEC 13818-6

teaches wherein a message for requesting the session connection is a

SessionSetupRequest message including: a DSM-CC (Digital Storage

Media-Command and Control) message header field, a Session ID

(Identification) field, a Reserved field, a Client ID field, and a Server ID

field, (4.2.4.1 on P. 25-26, and Table 4-8) and the SessionSetupRequest

message is transmitted from the client to the digital broadcasting server

("Network" referred to here refers to "SRM" as shown in Fig. 0-1 on P.xx,

since clause 4 relates to User to Network Session Messages as stated in

the contents on P. iii. P. 76 Step 1 teaches "the Client shall send

ClientSessionSetUpRequest to the Network..." to establish a new session

connection. As seen on Fig. 4-6, the client is sending and receiving messages from the SRM. JERDING et al. teaches that the SRM can be located at the cable headend [digital broadcasting server]).

Consider **claim 12, as applied to claim 1 above,** ISO/IEC 13818-6 teaches wherein the confirmation message for confirming the session connection is a SessionSetupConfirm message including: a DSM-CC (Digital Storage Media-Command and Control) message header field, a Session ID (Identification) field, a response field, and a Server ID field (4.2.4.2 on P 26-27, and Table 4-9), and the SessionSetupConfirm message is transmitted from the digital broadcasting server to the client ("Network" referred to here refers to "SRM" as shown in Fig. 0-1 on P.xx, since clause 4 relates to User to Network Session Messages as stated in the contents on P. iii. P. 78 Steps 7 and 8 teaches the SRM sending a ClientSessionSetUpConfirm message to the client. As seen on Fig. 4-6, the client is sending and receiving messages from the SRM. JERDING et al. teaches that the SRM can be located at the cable headend [digital broadcasting server]).

Consider **claim 17,** ISO/IEC 13818-6 teaches a system controlling a network digital broadcasting service (P. xx Fig. 0-1, sP. xix [0. Introduction], 2nd paragraph, Described further in detail in Clause 4) comprises:

a client and a SRM (Session Resource Manager), the client directly requesting the SRM (Session Resource Manager) for a session

connection, and establishing a session by receiving a confirmation

message for the session connection from the SRM (Session Resource

Manager) ("Network" referred to here refers to "SRM" as shown in Fig. 0-1

on P.xx, since clause 4 relates to User to Network Session Messages as

stated in the contents on P. iii. P. 76 Step 1 teaches "the Client shall send

ClientSessionSetUpRequest to the Network..." to establish a new session

connection. P. 78 Steps 7-8 teaches the client receiving a

ClientSessionSetUpConfirm message from the SRM establishing the

session connection. As seen on Fig. 4-6, the client is directly sending and

receiving messages from the SRM); and

the client directly requesting a program change from the digital

broadcasting server and receiving a confirmation message from the digital

broadcasting server, when the digital broadcasting server confirms the

channel change (P. 492-495 teaches a client directly requesting a

broadcast program from the SDB Server. A SDBProgramSelectRequest

is generated by the client and sent to the SDB Server for requesting a

channel change. A SDBProgramSelectConfirm from the SDB Server is

received by the client allowing the client to receive the requested

Broadcast Program).

ISO/IEC 13818-6 does not explicitly teach that the SRM (Session

Resource Manager) can also reside at the digital broadcaster server.

In the same field of endeavor JERDING et al. teaches session

setup and controlling video distribution between server and client.

JERDING et al. also teaches a SRM (Session Resource Manager) that resides at the digital broadcaster server (cable headend) (Fig. 2, Paragraph 0037 teaches where both the MOD application server 19 and the digital network control system [DNCS, SRM] are both located at the cable television headend 11.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the device in ISO/IEC 13818-6 to have the SRM at the cable headend as taught in JERDING et al. for the advantage of providing the cable service providers with greater control and manageability over the broadcasting infrastructure.

Consider **claim 19, as applied to claim 17 above,** the ISO/IEC 13818-6 teaches the client directly requesting the digital broadcasting server for a session termination and terminating a session by receiving a confirmation message for the session termination from the digital broadcasting server ("Network" referred to here refers to "SRM" as shown in Fig. 0-1 on P.xx, since clause 4 relates to User to Network Session Messages as stated in the contents on P. iii. P. 81-82 teaches a client initiating a release request. Step 1 teaches the client directly sending a ClientSessionReleaseRequest message to the SRM for releasing an existing session. Step 4-5 teaches receiving a ClientSessionReleaseConfirm message from the SRM terminating the session. JERDING et al. teaches that the SRM can be located at the

cable headend [digital broadcasting server]. As seen on Fig. 4-7, the client is directly sending and receiving messages from the SRM).

Consider **claim 20, as applied to claim 17 above**, the ISO/IEC 13818-6 teaches the digital broadcasting server directly requesting the client for a session termination and terminating a session by receiving a confirmation message for the session termination from the client (P. 87 – 88, step 2 teaches sending a ClientSessionReleaseIndication to the client for releasing an existing session. The SRM receives the ClientSessionReleaseResponse from the client and releases all the resources assigned to the session terminating the session for the client. JERDING et al. teaches that the SRM can be located at the cable headend [digital broadcasting server]. As seen on Fig. 4-12, the client is directly sending and receiving messages from the SRM).

4.   **Claim 5** is rejected under 35 U.S.C. 103(a) as being unpatentable over ISO/IEC 13818-6 (First edition 1998-09-01) in view of JERDING et al. (2006/0206913), and further in view of Chapman (US 7,113,484).

Consider **claim 5, as applied to claim 1 above**, ISO/IEC 13818-6 teaches directly receiving, at the client, a session termination request from the digital broadcasting server (P. 99 teaches receiving a ClientSessionReleaseIndication from the SRM for releasing session [session termination]. As seen on Fig. 4-20, the client is directly sending and receiving messages from the SRM. JERDING et al. teaches that the

SRM can be located at the cable headend [digital broadcasting server]),

and

ISO/IEC 13818-6 does not teach terminating a session if the client

cannot transmit a response to the session termination request from the

digital broadcasting server.

In the same field of endeavor Chapman et al. teaches a

broadcasting system. Chapman et al. teaches terminating a session if the

client cannot transmit a response to the session termination request from

the digital broadcasting server (Col 11: lines 23-35 teach that if no

response is received from the cable modem [client] the resources

allocated to the session is de-allocated [terminated]).

Therefore, it would have been obvious to a person of ordinary skill

in the art at the time the invention was made to modify the device in

ISO/IEC 13818-6 and JERDING et al. to terminate a session [de-allocate

resources] when no response is transmitted from the client as taught in

Chapman et al. for the advantage of freeing up resources for other clients.

5.   **Claim 18** is rejected under 35 U.S.C. 103(a) as being unpatentable over

ISO/IEC 13818-6 (First edition 1998-09-01) in view of JERDING et al.

(2006/0206913), and further in view of Yun (US 2007/0006254).

Consider **claim 18, as applied to claim 17 above,** ISO/IEC 13818-

6 teaches the client receiving a message from the digital broadcasting

server for checking a status of the client (P. 100 teaches receiving a

ClientStatusIndication message from the SRM for requesting [checking] a

status of the client. JERDING et al. teaches that the SRM can be located

at the cable headend [digital broadcasting server]), and directly delivering

a client status confirmation message, indicative of the status of the client,

to the digital broadcasting server (P. 100 teaches the client sending a

ClientStatusResponse message directly to the SRM containing status data

of the client. As seen on Fig. 4-21, the client is directly sending and

receiving messages from the SRM. JERDING et al. teaches that the SRM

can be located at the cable headend [digital broadcasting server]).

ISO/IEC 13818-6 does not teach the client periodically receiving a

message from the digital broadcasting server for checking a status of the

client.

In the same field of endeavor Yun teaches a cable broadcasting

system. Yun also teaches the client periodically receiving a message from

the digital broadcasting server for checking a status of the client

(Paragraph 0090 teaches the cable head end transmitting the command

[message] for periodically checking the operation state [status] of the set-

top box [client]. The client [POD and set-top box] periodically receives

these commands are sent periodically from the server to the client side).

Therefore, it would have been obvious to a person of ordinary skill

in the art at the time the invention was made to modify the device in

ISO/IEC 13818-6 and JERDING et al. to have the client periodically

receiver messages from the digital broadcasting server for checking a

status of a client as taught in Yun for the advantage of providing the head

end [digital broadcasting server] information regarding the set-top box in

realtime (See Yun, Paragraph 0073) and providing the head end with a

more competitive edge (Paragraph 0035 – 0036).

Allowable Subject Matter

6.   **Claims 8-11, 13-16** are objected to as being dependent upon a rejected

base claim, but would be allowable if rewritten in independent form including all

of the limitations of the base claim and any intervening claims.

The closest prior art teaches different session control messages

comprising of the following fields, dsmccMessageHeader(), session ID, reserved,

clientID, serverID, response, broadcast programId, reason, statusType,

resourceNumber, and resourceStatus.

The closest prior art does not teach or fairly suggest client ID fields in channel

change request/confirm, session termination request/confirm, client status

request/confirm messages. STB status field is also not taught or fairly suggested

for channel change request.

Cited Prior Art

7.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

Darleen Sadoski discloses two tier client to server architecture in

(Two Tier Software Architecture).

Darleen Sadoski discloses three tier client/application server/server

architecture in (Three Tier Software Architectures).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason K. Lin whose telephone number is (571)270-1446. The examiner can normally be reached on Mon-Fri, 7:30AM-5:00PM, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Edouard can be reached on (571)272-7603. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jason Lin

2/1/2007

PATRICK EDOUARD
SUPERVISORY PATENT EXAMINER